

Meningococcal disease

Meningococcal disease is caused by bacteria (germs) called meningococci, also known as *Neisseria meningitidis*. Although meningococcal disease is uncommon, it is a very serious disease. The infection can develop quickly and can cause serious illness or death. Children under five years of age and young adults aged 15 to 24 years are most at risk. Early diagnosis and treatment with antibiotics are vital.

Meningococci bacteria commonly cause:

Meningitis – infection of the membranes covering the brain and spinal cord
Septicaemia – infection in the bloodstream.

Both these infections are medical emergencies. If you think a person has symptoms that suggest meningitis or septicaemia, contact your doctor **immediately**, call triple zero (000) for an ambulance or go to the nearest hospital emergency department.

Most common in winter and spring

Meningococcal disease can occur all year round and in all age groups. However, it is more common during winter and early spring. In Victoria, the highest risk is in children under five years of age and young adults aged 15 to 24 years. About one-third of cases are in people 25 years of age or older.

A common bacteria that usually causes no harm

Meningococci bacteria live naturally in the back of the nose and throat in about 10 per cent of the population without causing illness. In a small number of people, a particular strain of the bacteria gets through the lining of the throat, enters the bloodstream and causes invasive meningococcal disease before immunity develops. The infection can develop very quickly and causes death in about 10 per cent of cases. If infection is diagnosed early enough and the right antibiotics are given quickly, most people make a complete recovery.

Most cases occur 'out of the blue' and are unrelated to any others. Outbreaks where more than one person is affected are rare. Although everyone is a carrier at some time, carriers are most common among young adults, especially men and smokers.

About a quarter of people who recover experience after-effects. Some of the more common after-effects include headaches, deafness in one or both ears, tinnitus (ringing in the ears), blurring and double vision, aches and stiffness in the joints, and learning difficulties. Most of these problems get better with time.

How it is spread

Meningococcal bacteria are difficult to spread. They are only passed from person to person by regular, close, prolonged household and intimate contact with secretions from the back of the nose and throat. Meningococci bacteria are only found in humans and cannot live for more than a few seconds outside the body.

You cannot catch meningococcal germs from the environment or animals. They cannot be picked up from water supplies, swimming pools, buildings or factories.

Some research shows that low levels of salivary contact is unlikely to transmit meningococci bacteria. In fact, saliva has been shown to slow down the growth of meningococci.

Signs and symptoms – infants and young children

Signs and symptoms of meningococcal disease in infants and young children can include:

- Fever
- Refusing to take feeds
- Irritability, fretfulness
- Grunting or moaning

- Extreme tiredness or floppiness
- Dislike of being handled
- Nausea and/or vomiting
- Diarrhoea
- Turning away from light (photophobia)
- Drowsiness
- Convulsions or twitching
- Rash of red–purple pinprick spots or larger bruises.

Signs and symptoms – older children and adults

The signs and symptoms of meningococcal disease in older children and adults can include:

- Fever
- Headache
- Loss of appetite
- Neck stiffness
- Discomfort when looking at bright lights (photophobia)
- Nausea and/or vomiting
- Diarrhoea
- Aching or sore muscles
- Painful or swollen joints
- Difficulty walking
- General malaise
- Moaning, unintelligible speech
- Drowsiness
- Confusion
- Collapse
- Rash of red–purple pinprick spots or larger bruises.

Get further medical help if you are still worried

If somebody close to you has some of these signs and symptoms and seems much sicker than usual, seek medical help immediately. In the very early stages, meningococcal disease can appear to be like other, less serious illnesses. Your doctor may not immediately recognise this illness.

You are the expert in your family's health. Do not hesitate to seek immediate medical help:

- If you are worried that the person is much sicker than usual.
- If the person seems to be getting worse, suddenly develops a rash or becomes drowsy
- Even if it has only been an hour or two since you last sought help

Young adults should not be left alone if they suddenly develop a fever – they may become seriously ill very quickly.

Early antibiotic treatment is vital

If meningococcal disease is suspected, an antibiotic (usually penicillin) is given immediately by injection. People with meningococcal disease are always admitted to hospital and may require admission to an Intensive Care Unit.

The sooner that antibiotic and other treatments begin, the less damage the disease will cause. However, this is a very serious infection, which can progress very rapidly despite the best treatment.

Close contacts are offered antibiotics

Most people who have had contact with an affected person, like school and work friends, do not need antibiotics. Very close contacts of an infected person are offered a short course of 'clearance' antibiotics in accordance with the Australian guidelines. These antibiotics are effective at getting rid of meningococci bacteria from the throat. They are not a treatment for meningococcal disease, nor do they necessarily prevent anyone from developing the disease.

Close contacts may include:

- Members of the same household
- A girlfriend or boyfriend

- Anyone who has stayed overnight with the person who is unwell in the seven days before the illness
- Children in a child care facility who have spent at least four hours or more in the same room as the affected person.

Immunisation

There are currently no vaccines in Australia that protect against serogroup B disease. There are two different vaccines that protect against serogroup C disease.

- **'Conjugate' vaccines** – these can be given to all people of all ages and provide long-lasting immunity against serogroup C disease. In Victoria, under the National Immunisation Schedule, a free vaccine is available to all children at 12 months of age.
- **'Polysaccharide' vaccines** – these cover several serogroups not usually seen in Australia. They are useful for people travelling to places such as Africa and for pilgrims to the Hajj in Saudi Arabia, where these serogroups are more common. These vaccines cannot be given to children under the age of two and only provide protection for about three years.

People with no spleen (or a partly functioning spleen) and laboratory staff who frequently handle the meningococcal bacteria should receive both the conjugate and polysaccharide meningococcal vaccines.

What to do if you suspect meningococcal disease

If you think a person has symptoms that suggest meningitis or septicaemia, contact your doctor **immediately**, call triple zero (000) for an ambulance or go to the nearest hospital emergency department. Early diagnosis and treatment with antibiotics are vital.

Where to get help

- In an emergency, always call triple zero (000) for an ambulance
- Your doctor
- Emergency department of your local hospital

Things to remember

- Meningococcal bacteria are only passed from person to person by regular close, prolonged household and intimate contact with secretions from the back of the nose and throat.
- Meningococcal disease is uncommon, but serious.
- It is important to go back to the doctor or hospital for more help if you are still concerned.
- Meningococcal C vaccine provides good protection from one strain of meningococcal disease.

This page has been produced in consultation with, and approved by:

Department of Health - Communicable Disease Prevention and Control Unit

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